

**\*\*DRAFT\*\* Potential Climate Change Vulnerabilities of Tribal Communities \*\*DRAFT\*\***  
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	Drivers								
	Higher Temperatures	Earlier Snowmelt	More rain, less snow	More extreme flood events	Longer, more frequent droughts	Sea Level Rise/ Ocean Acidification	More Erosion	Longer wildfire season/ More frequent & intense wildfires	Cumulative Impacts
<b>Subsistence Activities</b>	Shift or loss of traditional aquatic, plant and animal species	Barriers to aquatic species migration/ movement; shift or loss of traditional aquatic, plant, and animal species	Temp impacts on cold-water species; shift or loss of traditional aquatic, plant, and animal species	Reduced water quality; habitat disturbance/loss	Reduced productivity/ greater stress on traditional aquatic, plant, and animal species	Loss of coastal/tidal wetland habitats and species; ocean and estuarine food web changes; loss of shellfish	Reduced water quality; stream channel changes; habitat disturbance/ loss	Reduced water quality; increased turbidity and sedimentation in streams; habitat and species disturbance/ loss	Dietary changes; loss of local food resources; change in hunting/ gathering practices; loss of income; change in fire management (fewer burning windows)
<b>Traditional Practices</b>									Loss of traditional medicinal plants and materials for jewelry, sculptures, ceremonial pieces, basketry, nets, and lodgings.
<b>Sacred Sites and Practices</b>	Shift or loss of traditional aquatic, plant and animal species	Reduced streamflows in summer/fall	Reduced streamflows in summer/fall	Damage to sacred sites	Reduction in streamflows; reduced productivity/ greater stress on traditional aquatic, plant, and animal species	Inundation of/ damage to sacred sites; shift or loss of traditional coastal species	Damage to sacred sites	Damage to sacred sites; species disturbance/loss	Loss of traditional materials and other components for ceremonies; loss of sacred sites; changes in traditional timing of spiritual practices
<b>Water Supply</b>	Changes in runoff timing reducing seasonal availability; higher demands	Reduced reliability; less groundwater recharge; decrease in summer/ fall runoff	Changes in runoff timing reducing seasonal availability; less groundwater recharge; upsets the balance	Damage to conveyance infrastructure; increased treatment; service interruptions	Reduced availability and reliability of surface water; less groundwater recharge; increased treatment	Damage to coastal conveyance infrastructure; reduced supplies; increased treatment	Damage to conveyance infrastructure; increased treatment	Damage to conveyance infrastructure; increased treatment; service interruptions; sedimentation	Reduction in water availability; reduced quality or contamination of local surface and/or groundwater supplies; increased in water-related illnesses; potential conflicts over water rights; higher demands reduce water needed for ecosystems/ species
<b>Water Quality</b>	Increase in water-borne illnesses; taste and odor issues; increase in algal blooms; impacts to species	Seasonal changes in quality due to decreased summer/fall runoff	Seasonal changes in quality due to decreased summer/fall runoff	Wastewater spills; contaminated stormwater runoff; turbidity	Increase in water-borne illnesses; taste and odor issues; higher contaminant loading; increase in algal blooms; impacts to species	Increased by-products from treating brackish water; inundation of wastewater treatment facilities or discharge impacts	Damage to conveyance and wastewater infrastructure; increased turbidity	Damage to infrastructure, increased turbidity/ sedimentation	
<b>Health</b>	Increased mortality rates; poor air quality; allergens increase; illnesses <sup>1</sup> exacerbated; increased health care costs	Reduced water supply reliability and quality	Change in prevalence & spread of disease; reduced water supply reliability and quality	Change in prevalence & spread of diseases; mortality; displacement <sup>2</sup>	Change in prevalence & spread of diseases; mortality; reduced water supply reliability; increased malnutrition; increased health care costs	Displacement; illness due to poor water quality; reduced coastal water supply reliability	Displacement; poor water quality; mudslides	Poor air and water quality; displacement; illnesses, esp. respiratory, exacerbated; mortality; mudslides	Overall reduction in community health; increase in chronic and infectious diseases; increased health care costs; impacts associated with displacement

<sup>1</sup>Illnesses - includes chronic, infectious, and vector borne diseases

<sup>2</sup>Displacement - encompasses associated health consequences, including mortality, due to economic disruption, loss of personal income, and disruption of social networks